

BRAUER ON GENERIC VALUES IN THE MUSCOIDEA.

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The idea seems to prevail with some American writers on Muscoidea, that generic and specific values can be standardized, that is, that the validity of genera and species should be made dependent upon the amount of difference. Such practice, dictated merely by convenience and the limitations of the worker, manifestly does violence to the facts in nature; it could be ignored as unscientific, were it not so generally advocated. Moreover, the inevitable result of confusing poorly defined species or genera is to invalidate such data as have been published upon them, from both a purely scientific and an economic standpoint. Thus, Dr. Townsend has shown me that flies, which according to the accepted "system" are one species, lay very different eggs or have remarkably distinct first-stage larvæ, that indicate, at the least, wide differences in biology.

It is a well recognized and generally accepted principle, that recent groups have less clearly marked species and genera than the more ancient groups, where the intergradient forms have dropped out. In the Muscoidea we have such a recent group and the great diversity of modifications presented makes the problem of establishing a natural classification, that is, one that follows the phylogeny, an extremely difficult one. Friedrich Brauer, who, in spite of many adverse criticisms, remains one of the greatest exponents of the Diptera, clearly perceived this, as is shown by the following translation of a passage in his early paper on the systematic significance of the larval characters of the Diptera, published forty-five years ago.*

"In surveying the larval forms, one perceives at once that the genera and families of the orthorhaphous Diptera are far more sharply characterized, that is, have a higher systematic value, than the Cyclorhapha, among [the imagines of] which occurs the greatest diversity within the narrowest limits. While with the Orthorhapha the majority of the families can

*Kurze Charakteristik der Dipteren-Larven zur Bekräftigung des neuen von Dr. Schiner entworfenen Dipteren-Systemes. Verh. zool.-bot. Ges. Wien, vol. 19, pp. 843-852 (1869).

even be recognized and sharply characterized in the larval state, those of the Cyclorhapha on the other hand disappear under the pen.

“No one has up to now characterized the subfamilies of the muscids [Muscoidea] in our sense as larvæ; indeed, not even for such obvious forms as Oestrines, Muscines and Sarcophagines can characters be determined. We must leave it to the future to find such characters or to confirm their non-existence. It can be readily understood that the slight characters by which the imagines of these subfamilies are separated, although constant, find none, or a hardly appreciable, expression in the fundamental larval organization.”